Needs Assessment Report
MIT 530 – Evaluation and Change in Instructional Development

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EXECUTIVE SUMMARY

The New Hanover County School System is a Local Education Agency (LEA) within the North Carolina Department of Public Instruction. New Hanover County is located in the southeastern part of the state. The Mission of the New Hanover County School System is to provide a high QUALITY education that prepares all students to be productive and contributing citizens of a global society. The school system is comprised of thirty-six traditional schools and one Alternative High School.

Lakeside High School is the alternative school for New Hanover County's students who struggle academically as well as behaviorally. The focus of Lakeside High School has changed this academic year, 2004 – 2005. The Administration for the school district saw the need to better serve rising 9th grade students who did not meet the local, state, and federal requirements for promotion based on the Federal, State, and Local guidelines. The goal of Lakeside is to prepare the 9th grade students to return to their home High School by offering a rigorous and varied curriculum in the core areas of Language Arts, Math, Science and Social Studies as well as Computer Applications.

The vision of Lakeside High School is: "To create a positive, safe, and orderly learning environment where all students can learn, be successful, and become productive citizens in our global society." Mr. Oates, the principal of Lakeside, feels that one way to achieve this vision is for teachers to integrate technology into classroom curriculum and instruction to enhance students learning. In this way he believes that students will be best prepared and contribute to the community in which they live and work.
Mr. Oates is concerned about the lack of technology integration in the 9th grade lessons and unit plans. He has observed that not all of the 9th grade teachers at Lakeside are integrating technology into their classroom instruction. This concern has prompted Mr. Oates to seek the help of a Needs Assessment Team to help determine the causes of this problem.

To determine the cause of this problem a Training Needs Assessment (TNA) was conducted at Lakeside. The stages of the TNA were: analysis of existing resources and data, survey of teachers' technology attitudes and skills, observations of classroom teachers' instruction, along with interviews with the principal, Computer Resource Teacher as well as all of the 9th grade teachers. The above mentioned stages were designed to find out the expected behaviors, actual behaviors, and attitudes of the 9th grade teachers at Lakeside concerning technology integration. Identification of possible causes of the problem will be explored and recommendations for solutions will be addressed.

INTRODUCTION

Lakeside High School, which is located in the inner city, is the Alternative School for the New Hanover County School District. The school has a student population of 230. Of the 230 students, 88% are African American, 11% White and 1% other ethnicities. Sixty percent of the student populations are male with females making up the other forty percent. The 9th grade students make up the largest part of the student body. There are approximately 155 9th graders enrolled at Lakeside.

Lakeside runs two very distinct schedules. The 9th grade schedule is based on yearlong academic courses with an hour of remediation in the morning in the areas of computer applications, math or language arts. Courses are 55 minutes in length. Lakeside employs nine 9th grade teachers. Class sizes are smaller with an average of 15 students per class for the purpose of meeting the needs of the students. The school also houses a small upper class student body. There are seventy-five 10th – 12th grade students currently enrolled at Lakeside. The schedule for the upperclassmen is based on New Hanover County's block scheduling similar to the traditional High Schools. Students attend their home High School during the first period of the day and then are bused to Lakeside to begin their studies. There are eight core academic teachers at Lakeside for the 10th – 12th program.

The yearlong 9th grade schedule at Lakeside was designed for teachers to be creative and develop integrated units of instruction. The two, four man teams, consisting of a math, social studies, language arts and science teacher, were created with the desire to work as a cohesive unit, developing integrated lessons to aid in transfer of student learning from one subject area to another. It is important to note that New Hanover County as well as the State Department of Instruction have defined expectations for teachers to integrate technology into their lessons. The desire of the program was to meet the different learning styles and ability levels of the students by using all available technology and resources at Lakeside.

The 9th grade teachers at Lakeside High School vary in their education levels. Levels range from a Bachelor's Degree to a Master's Degree in education. However, three of the nine teachers working with 9th grade students are veteran teachers. The other six teachers have minimal teaching experience. Teachers' technology levels vary as well. The new teachers with the least amount of teaching experience are more computer savvy than the veteran teachers.

This is Mr. Oates first year as the principal of Lakeside. It is important to note that this is also his first year as an acting principal. Taking on the challenges of an Alterative High School has been overwhelming at times. However, Mr. Oates maintains a positive attitude towards his staff as he learns all the responsibilities of his job. One of the strengths he brings to Lakeside is his classroom experience using a variety of technology integration and resources.

The 9th grade teacher's attitude towards technology integration varies. The new and inexperienced 9th grade teachers spend their time focusing on their classroom management, developing lesson plans, and preparing students to pass the end of course tests required by the state. Little time is available to develop technology rich lessons at this time.

Problem Description

Jerry Oates, the principal of Lakeside Alternative High School believes that the students attending his school deserve a unique, creative and integrated curriculum. Students attend Lakeside because they are not successful in a typical classroom and high school environment. Mr. Oates strongly believes that quality education includes the integration of technology into teacher lessons. Mr. Oates has expressed concern over the lack of technology integration particularly in the 9th grade classes. Mr. Oates identified this problem during classroom observations as well as reviewing teacher lesson plans

NEEDS ASSESSMENT PROCESS

Description of the Model

To conduct and plan the needs assessment, Allison Rossett's Training Needs Assessment model will be used. This model incorporates systematic inquiry and data collection to fully scope and verifies the problem.

The main steps of the Training Needs Assessment model include:

Plan: During the planning phase the context is assessed, the purpose of the needs assessment is identified, techniques and tools which best serve the purpose are selected, and the TNA Planner and individual stages are developed. The TNA Planner identifies constraints and resources. Individual stages are planned to include details of the procedure which will be carried out throughout the process.

Conduct: Data is collected by creating instruments and administering them in their respective stages selected in the planning phase.

Analyze: When the data is completely gathered, it will then be analyzed. It will be determined whether or not further stages are needed to meet the purpose of the needs assessment. When data is fully gathered, it will be interpreted and causes and solutions will be determined.

Communicate: The results and recommendations will be presented in a final report.

Description of Needs Assessment Plan

The objective of the needs assessment was to determine why the 9th grade teachers are not integrating technology into their lesson plans as desired by the principal.
The TNA began on March 7, 2005 and concluded on March 29th (Appendix A – Gantt Chart).The needs assessment incorporated the following tools: extant data analysis, a survey, teacher observations and individual teacher interviews. These tools supplied the necessary information to determine optimals, actuals, feelings, causes and solutions surrounding the problem. The needs assessment was conducted in four stages and data was collected at each stage Upon completion of each stage, the data was analyzed and provided information for how to proceed with following stage. After determining the cause(s) of the problem, solutions were recommended. A full report will be presented to Mr. Oates, the principal of Lakeside.

The needs assessment team consisted of two UNCW graduate students, Addy Long and Helen Lipka. The roles and responsibilities were divided equally among the two students. Both students worked together to develop and finalize the TNA, make recommendations, and to communicate the results of the TNA.

Helen Lipka, who is the Computer Resource Teacher at Lakeside, spoke with Mr. Oates the principal, addressing the purpose of the TNA. (Appendix B)

Extant data analysis was completed by Addy Long. Gathering information from the Assistant principal and the computer resource teacher at Lakeside she displayed her finding in the charts found in Appendix B. Analysis of the findings was done as a team.

A letter, along with the survey, that given to the 9th grade teachers was developed by both Addy and Helen. Helen was responsible for placing the surveys in individual teacher mailboxes. She also sent out a friendly e-mail reminder to the teachers to encourage them to return the survey on the assigned day. Since Helen works at Lakeside she spoke individually with the teachers about the importance of the survey to help in staff development and for future technology integration.
Observations were conducted by both Addy and Helen on the same day. Analyses of the observations were done by both parties. To implement stage four Helen interviewed the Mr. Oates and individual 9th grade teachers.

Description of Data Collection Process

The data collection process was conducted in four stages. In the first stage, existing information was reviewed in an extant data analysis. The information was obtained by Helen Lipka, CRT for Lakeside High School. This information included an inventory of the school's hardware and software, staff development programs, STAR score, and basic teaching methodology. (Appendix C- Extant Data Results) The purpose for reviewing the extant data was to get a complete picture for the resources and materials available to teachers to use in teaching and to begin to construct a picture of what the teachers are doing now.

In the second stage, a survey instrument was developed and distributed to all 9th grade teachers and collected several days afterward. The survey was distributed and collected by Helen Lipka by placing the surveys in teacher's school mailboxes and having the survey returned to her school mailbox. The information from the survey was then reviewed and the observation and interview protocols were adjusted accordingly. The purpose of the survey was to determine attitudes, feelings and skill level regarding technology and integration practices and to begin to identify possible cause(s) of problem.

In the third stage, all 9th grade teachers were observed by Helen Lipka and Addy Long by using the observation protocol. Helen Lipka conducted 5 observations and Addy Long conducted 4 observations. The observations were scheduled during regular class hours in 30 minute increments. The observer sat in the back of the classroom and completed the observation protocol instrument. The information from the observations was then used to further revise the interview instrument. The purpose of conducting teacher observations was to observe technology integration, to see the degree of technology integration and its effectiveness, to identify what kind of problem is evident, and to reinforce and verify information obtained from the survey.

The fourth stage included interviewing the principal along with all the 9th grade teachers using . Data was gathered from 9th grade teachers, the school principal and a subject matter expert. This information displayed teachers' attitudes towards technology, their technology skills, technology integration knowledge, possible causes and solutions, and what the optimal for this situation should be. The purpose of conducting teacher interviews was to discuss feelings concerning technology integration, to ask teachers if they are familiar with all policies surrounding technology integration at the local and state level, to get a "feel" for teacher attitudes towards technology integration, and to gather a wish list from teachers and suggest possible solutions

Description of Instruments

Survey Instrument
The survey instrument was created to gather both quantitative and qualitative data. There are 24 total items on the survey, the first 21 items on the survey are quantitative, and the last three are qualitative. The first three items are used to collect demographic information and the next eighteen questions ask the teachers to self-report on their technology use and skills using different types of technology. The last three items on the survey instrument are qualitative and seek answers to questions such as workshop scheduling and use of school technology resources. (Appendix D)

Observation Instrument
The observation instrument was created to gather primarily qualitative information about the teacher's use of technology in the classroom for teaching purposes and to reinforce information reported using the survey instrument. The observation instrument is based on two main questions: is there any observable technology being used in the classroom

during this lesson? And how is the technology being used? After the first question, Is there any observable technology being used in the classroom during this lesson? a chart with various technologies was created for the observer to check off if the technology was used and a section for remark. After the second question, how is the technology being used? Another chart is present with items such as "drill and practice", "introduction to a lesson" and "used in research" for the observer to check off how the technology was used (or for what purpose) and a section for remarks. (Appendix E)

Interview Instrument

Two separate interview instruments were prepared: one for 9th grade teachers, the other for Lakeside High School's principal. The interview instruments were created to gather qualitative information about teachers' and principal's attitudes towards technology, their technology skills, technology integration knowledge, possible causes and solutions, what the optimal for this situation should be, and to further reinforce information gathered through the survey and observation instruments. Both interview instruments were created with an Introduction, Body and Conclusion.

The Introduction section served to introduce the interviewer and interviewee, explain to them the purpose of the interview and how the information from the interview will be used. The Body of the interview included the main qualitative questions. For the principal it included questions such as, "When you hear the term 'technology integration' what comes to mind?", "What do you think about the current status of tech integration at the 9th grade level?", and "What are your expectations for teachers' integration of technology into their lesson and unit plans?" The Body of the teachers' interview instrument included questions such as, "What is your definition of "technology integration?", "What are your interests in using technology in your lessons?", and "If you had more time to plan for technology integration would you create integrated lessons?"

The Conclusion section of both interview instruments was used to summarize the interviewee's thoughts, ask them if they had anything else to add, thank the interviewee for their time, and ask if they could be contacted in the future for follow-up questions if need be. (Appendix F)

Data Analysis and Findings

Several methods were used to analyze the data that was collected. First, extant data analysis of technology resources was collected and analyzed. The first part of the TNA shows that Lakeside High School is rich in teacher resources and various types of technology as evidence in the extant data analysis. (Appendix C) The STAR Chart from ISTE was used to gather data for evaluation. The findings clearly show that Lakeside has the hardware and software to support technology integration. The school has one networked computer lab, with 24 computers and Internet connection with an LCD project for group instruction. There is one networked vocational lab with 16 computers, as well as 2 wireless mobile labs with 16 laptop computers in each. Each classroom has at least one networked computer with internet connection with a stand alone printer. A media

retrieval system was installed in the media center four years ago when the building was renovated. Each of the classrooms has a networked computer, mounted TV, overhead projector, and an aver key which is a presentation device connecting the computer to the TV.

Lakeside has a Computer Resource Teacher who maintains the technology resources at the school, runs the computer lab on a daily basis, as well as works with teachers to assist in integrating technology into their lessons. She also holds monthly Staff Development providing workshops with a focus on proficiency of software and hardware. Alternative workshops are held per teacher's request to aid in the integration of technology. Lakeside has a Technology Team made up of one core teacher from each subject area. The team members hold a vital role as they assist teachers when the CRT is unavailable. One of the 9th grade teachers is on the technology team and works closely with all the 9th grade teachers.

Review of the computer lab schedule showed that the lab is used 70% of the time. Documentation showed that 9th grade teachers used the computer lab 30% of the time for technology integration. Students in the 9th grade used word processing software, Microsoft publisher to create brochures, internet research, creation of power point presentations, as well as practice for the computer competency test. Five of the nine 9th grade teachers sign up and use the computer lab on a regular basis.

The next method of data collection was a survey that was sent out to 9th grade teachers to assess and analyze attitudes, skills and feelings towards technology integration. Data from the surveys was analyzed using SPSS (Appendix G) Cross tabulation was used to evaluate if there was a relationship between teachers years of experience knowledge, skill level, as well as attitudes. The findings showed that 44.4% of the teachers have 0-5 years teaching experience, 33.3% have 6- 11 years of experience, 11.1% have 18 – 23% experience and 11.1% have 30 years or more teaching experience. The survey asked teachers what they felt was the biggest challenge they faced as a classroom teacher. Results showed that behavior management was the largest concern. The responses showed 66.7% of the teachers were first and foremost concerned with behavior management as a concern. Other reasons stated were; attendance issues, standardized test requirements, and negative attitudes of teachers towards quality education for the students.

The survey also included a self-reporting section of 18 questions which were used to garner teachers' attitudes, skills and knowledge of technology integration. All 18 questions were answered by the teachers using a scale of 6-1 with the following meanings: 6 = strongly agree, 5 = agree, 4 = undecided, 3 = disagree, 2 = strongly disagree, 1 = not applicable

In response to the first question "I would like to learn more about integrating technology into my lessons", 22% of 9th grade teachers strongly agreed and 44.4% disagreed. The other 33.3% were undecided or disagreed. When teachers were asked to respond to the statement, "I do not know where to begin with thinking of ways to integrate technology

into my lessons", 33.3% agreed, 22.2% were undecided and 44.4% disagreed.

66.7% of 9th grade teachers strongly agreed when asked to respond to the statement, "I know I can ask the CRT for help with ways to integrate technology". The other 33.3% also agreed. 77.8% of teachers frequently use the overhead projector during lessons, and 44.4% agreed that they were skilled at using the media retrieval system.

When asked if they felt they were skilled at using the digital camera, 66.6% of teachers agreed or strongly agreed that they were skilled. 44.4% of teachers felt that they are skilled at using the Averkey presentation device to integrate technology in the instruction of a lesson. 55.5% of teachers feel they are skilled at using the LCD projector.

The statement was posed to the 9th grade teachers, "I am very skillful in using the video camera." The response showed that 77.8% of the teachers felt adept at using a video camera in their classroom. The 9th grade teachers responded at 55.6% towards using new teaching strategies in their lessons.

Use of the wireless mobile computer lab showed low results based on the sign out schedule that the Computer Resource Teacher documents on a weekly basis. The survey showed that 88.9% of the 9th grade teachers did not feel comfortable using the wireless mobile lab in their class.

Findings showed that the 9th grade teachers developed and used Power Point Presentations to integrate technology in their lessons at 33.3%. Another concern was that teachers felt that integrating technology took away from the quality of their lesson with the response of 88.9%. The results show that the 9th grade teachers feel that technology integration is not a high priority in the development of their lessons. The survey showed that 77.8% of the teachers felt that trying to integrate technology into their lessons was too time consuming.

The 9th grade teacher's response to attending staff development integrating technology at Lakeside as well as the staff development workshops held on a county level was recorded at 88.9%. The survey showed that 9th grade teachers are aware of New Hanover County's policies towards the number of credits they need to renew their teaching license at 77.8%. The 9th grade teachers responded with 66.7% in regards to the requirements that the Department of North Carolina expects for the licensure renewal process.

The qualitative section of this survey revealed that 70% of the 9th grade teachers have brought their classes to the computer lab at least once a semester. One comment by a teacher who brought his students to the computer lab only one time this entire year was, "Too many behavioral problems. Students don't stay on task in the computer center." Another question that was asked was, "Do you integrate technology into your weekly lessons?" The response showed that 75% of the 9th grade teachers do integrate technology on a weekly basis in some shape or form. Ninety-two percent of the teachers responded favorably to attending monthly workshops offered by the CRT at Lakeside. When asked what time would be the most convenient to attend workshops 92%

responded 8:30 AM. Suggestion for the type of workshops teachers would like to see offered are the following:
"How to integrate math," "Database and spreadsheet use," "How to use a smart board, LCD player and continued use of NCWise," "Citation of internet sites for research papers," "How to use graphic organizers in particular Inspiration," and "Hardware use."

The third type of data analysis was based on individual teacher observations. Observations were announced and began at the start of class. Total observation time was 30 minutes per class. The results of the observations, shown in the chart below, indicate the type of technology used as well as how the teacher integrated technology during the lesson.

Technology	Number of Teachers using Specific technology	How technology was used during observation
TV/VCR		
TV/Aver Key hook-up to the computer		
Overhead projector	6	Used for bell work, to solve math problems, outline of student notes for the lesson
Digital Camera		
Scanner		
Digital Camcorder		
LCD Projector	2	Used for demonstration requirements of project Used to demonstrate how to use the internet for searching specific sites
Computer	3	Used along with the LCD Projector
Software Program	3	Microsoft Power Point

Interviews were conducted with the principal and individual 9th grade teachers during the last phase of the TNA. The outcome of the interviews data analysis will help support the recommendations of the TNA team members by showing the triangulation of all existing data analysis.

Results of the interviews are follows: Mr. Oates the principal understands the importance of technology integration in teacher lessons for student involvement. He stated that he believes that students learn best when they are actively involved in their lessons. Looking specifically at the 9th grade teacher's observations and lesson plans Mr.Oates stated, "From classroom observations and lesson plans I see that the 9th grade teachers as a whole are not being creative in the way they use technology in their lessons. I see teachers using the overhead, I see the TV being used to show movies to enhance a specific topic, but, I do not see the computers in the classroom being used."

Mr.Oates supports staff development in regards to technology integration. However, at present Lakeside does not have an incentive program in place for teachers who attend monthly workshops.

The following information was gathered after analyzing interviews that were conducted with the 9th grade teachers. Ninety percent of the 9th grade teachers felt comfortable using technology in their classroom. However it is important to note that the definition of technology for each individual teacher varies. The majority of teachers responded that technology integration was using computers in some form for the enhancement of teaching. Teachers were asked what resources they considered to be technology. The following answers ranged from computers, LCD projectors, audiovisual resources, overhead projectors to graphic calculators. (Appendix H)

Teachers were asked to share how they use technology in their lessons. Fifty-five percent of the teachers responded that they use power point presentations in their lessons. Twenty-two percent of the teachers stated that they use the overhead projector for daily lessons.

The next interview question asked teachers to share any barriers or obstacles that exist at Lakeside preventing the use of technology. The lack of resources was the number one barrier with 66% of the teachers responding in this manner. Student behavior was rated at 22% as an obstacle preventing the use of technology.

Teachers were asked if they felt comfortable signing up to use the computer lab. Fifty-five percent of the teachers said that they feel comfortable using the computer lab for instruction. Thirty-three percent of the teachers responded in the negative.

When asked if time was an issue when planning for technology integration 55% of the teachers agreed that time was a concern. The next question asked teachers if they have ever used the wireless mobile lab in their classroom. The results showed that 88% of the teachers have not used the mobile lab. Two of the responses from the teachers regarding the wireless mobile lab were “I heard it doesn’t work well” and “The batteries run out before the end of class.”

The responses to the question, “How can I help you with the use of technology integration in your lessons?” were 33% stating the need for new resources, 22% would like to learn software programs, one teacher felt self-sufficient and doesn’t require help, another teacher asked how to learn how to use the wireless mobile lab, one teacher asked for websites to be unblocked for student use, and one teacher stated that she did not feel comfortable using computers.

RECOMMENDATIONS

Interpretations of Findings

Extant data analysis shows that Lakeside High School is rich in technology. All the necessary hardware and software is in place to support technology integration. However, after speaking with Helen Lipka, the Computer Resource Teacher, it was discovered that the technology at Lakeside is older than other schools in the New Hanover County School District. The computer lab which houses 24 computers and uses the Windows 98 platform is 4 years old. The Administrative Offices have been upgraded to the Windows XP platform this past fall of 2004. The vocational lab with 16 computers is 4 years old also. The daily use of the computers causes them to break down frequently. Helen stated that she spends more time fixing the computers, dealing with technical and hardware issues than helping teacher integrate technology into their instruction.

The wireless mobile computer lab is also 4 years old. It was learned that last spring new batteries were placed in the laptops along with a new image. However, the batteries still do not hold the charge which causes student and teacher frustration when they are used. The media retrieval system is in good working order and teachers do use it to show videos to reinforce lessons. All instructional classrooms except one have a TV and averkey presentation tool. Teachers stated during the interview that due to the placement of the TV it is hard for students to view information such as Power Point Presentations that they have developed and use in instruction when using the averkey. Teachers would like to have a LCD projector in their classroom for display when using the computer as a tool for better visual affects.

The majority of teachers said that they use the over head projector in their classrooms. During the interview with the CRT it was learned that the overhead projectors are 8 years old. The overhead projectors came from the other schools in the district when they upgraded their models. The same is true of most teacher printers.

Analysis of the surveys, observations and interviews generated the following information concerning skill, attitude and further information concerning resources. Forty-four percent of the 9^{th} grade teachers are new to teaching with 0-5 years of experience. Studies show that during the first 3 years in the classroom teachers spend more time on developing a plan for classroom management along with learning their specific material for lessons than any other component. Since Lakeside is the Alternative School with students with behavioral as well as academic problems it is understandable for the teachers to comment on their concern for behavior management in regards to bringing students to the computer lab or even to the use of the mobile lab in their classrooms. When teachers do not have the control of their students, students can misuse equipment and resources.

Overall teachers felt comfortable integrating technology into their lessons. Although it was found that integration is only taking place by 55% of the teachers. However their definition of technology integration varied from just computers to other equipment such as overheads, TV's and electronic gaming equipment used in instruction. Another major concern was the time it takes to create and develop integrated lessons. Teachers shared if they had more time set aside to develop technology rich lessons they certainly would. Teachers were also very concerned about the resources at Lakeside. During the interview process they shared openly about the age, quality and lack of technology resources available.

Mr. Oates shared his view of technology integration during the interview process. His expectation is for teachers to use technology and all available resources to create a rich learning environment for the students. Through teacher observations and lesson plans he stated that he would like to see more technology integration. He strongly supports staff development for the integration of technology. It is important to note that at this time there is no incentive program for teacher who integrate technology. The expectation of Mr. Oates for teachers to include technology integration is not stressed openly. The CRT is the individual at Lakeside who motivates and encourages teachers to use the computer lab, integrate technology into lessons and create hands on lessons for students. Mr. Oates agrees with the teachers that the biggest obstacle for the lack of integration is due to behavior problems of students.

Prioritization of the Findings and Recommendations

Possible solutions to the problem statement that technology is not being integrated in the 9th grade classes as desired by the principal are as follows:

1. Communication from Mr. Oates on the importance of integrating technology into weekly lesson in the 9th grade classes. Hand in hand with this is the development of an incentive program for teachers who integrate technology. Create a technology of the month award to be given at faculty meetings.
2. Acquisition of up-to-date resources to aid in teacher ease of integrating technology into their lessons.
3. Develop a clear mission statement for Lakeside defining the role of instructional technology in teacher lessons.
4. Provide time for teachers to create integrated lessons.
5. Offer staff development opportunities for behavior management as well as how to work with students who attend the Alternative School. Also, provide staff development on integrating technology in specific subject areas as well as how to use the wireless mobile computer lab.
6. Create a teacher resource book of all the integrated technology rich lessons developed by teachers to be housed in the computer lab for check-out.
7. Provide a link on the school web site specifically highlighting information on the "how to's" of technology integration with sample lesson plans.

Appendices

Appendix B

TNA Planner Purposes		
Description	Status	Sources
Optimal	On hand but need additional info	Principal, Secondary Education Computer Specialist, Federal/State/County guidelines
Actual	On hand but need additional info	Extant data, teachers, Principal, Computer Teacher
Feeling	Need	Teachers, Computer Resource Teacher
Causes	Need	Teachers, Principal, Computer Resource Teacher
Solution	Training is presumed	Principal, Secondary Education Computer Specialist , Teachers, Computer Resource Teacher

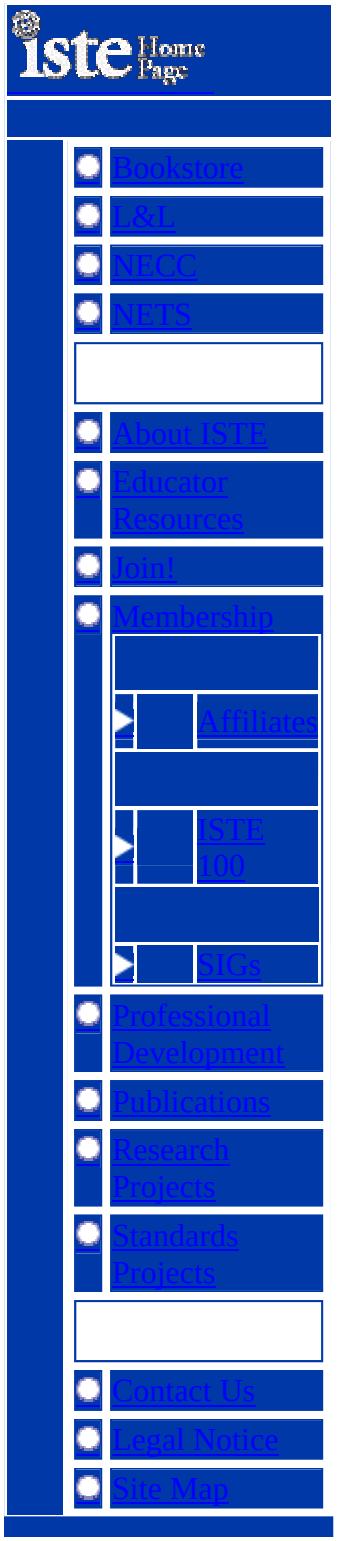
TNA Planner Techniques and Tools			
Stage	Technique	Tools	Sources
1	Extant data	~Analyze teacher lesson plans ~Teacher computer competency results ~Teacher observation instrument documenting technology integration ~Staff records (yrs. experience, etc.) ~Staff development offerings ~ HW and SW inventory ~Computer lab schedules ~ CRT monthly report	Principal observation and written data Copy of Roosters CRT developed inventory, copy of lab schedule, Copy of monthly report

		~New Hanover County technology requirements for teachers ~State Department goals and objectives for technology integration and expectations of teachers	New Hanover County Technology Plan State Department Web Site
2	Needs Assessment	~Survey of 9th grade teachers to determine attitudes, feelings and skill level regarding technology and integration practices ~ Identify possible cause(s) of problem	Survey instrument results
3	Needs Assessment	~Observation of 9th grade teachers to observe technology integration ~Observation will be used as an investigation tool to see the degree of technology integration and it's effectiveness ~Observation to identify what kind of problem is evident ~ Observation instrument used to reinforce and verify information obtained from the survey	
4	Needs Assessment	~Interview of 9th grade teachers to discuss feelings concerning technology integration ~Interview used to ask teachers if they are familiar with all policies surrounding technology integration at the local and state level ~Interview used to get a "feel" for teacher attitudes towards technology integration ~Interview used to gather a wish list from teachers and suggest possible solutions	Interview documentation

Appendix C

Star Chart From ISTE

Extant Data



STaR chart

CEO Forum on Education & Technology

Lakeside
New Hanover County
1. Hardware: High Tech
2. Connectivity: Mid Tech
3. Content: Mid Tech
4. Professional Development: Low Tech
5. Integration and Use: Low Tech
Based on an average of your responses, your school is at the Mid Tech level.

Mid Tech Educational Benefits:
Improve higher-order critical thinking with access to multimedia content
Master basic skills through drill and tutorial software
Greater information resources available for research and education from Internet and CD-ROM
Most students/teachers able to communicate with parents, experts, other students and teachers outside the school

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Summary of your answers:

	Questions:	Your answers:
1	How many students per instructional computer?	(a) More than 10
2	How long does it take to receive technical support?	© Takes place same day
3	What percent of instructional rooms and administrative offices connected to the Internet?	(d) 100% or more of all instructional rooms and administrative offices are connected to the Internet
4	What is the quality	(d) Direct connectivity in

"Providing leadership and service to improve teaching and learning by advancing the effective use of technology in education"

	of your school's connection to the Internet?	all classrooms with adequate bandwidth to prevent delays
5	What is the use and availability of other forms of hardware technology?	© Wide variety of VCRs, cable TV, telephones, voicemail, random access video, projection devices, digital cameras, scanners, portals, personal digital assistants, two way video conferencing, calculators
6	What forms do delivery and format of professional development take?	(a) Trainer-led instruction
7	What percent of the technology budget is allocated to professional development?	(a) Less than 10%
8	What is the understanding and use of digital content by educators?	(b) *100% at adaptation phases *Some begin to use with students
13	What is the content budget allocation to purchase digital content?	(a) Use some supplemental instructional materials funds only
9	Software format:	(b) Receive information from CD-ROM and searchable, online content
10	What is the role of the role of educator and degree to which digital content is integrated into instruction?	(b) *Teacher directed *Beginning to integrate into instruction
11	Do the students employ digital content to enhance learning?	(b) Use for research, communications and presentations
12	What percentage of	(a) *50% or more

	students are using digital content and what is their frequency of use?	*Weekly
14	How does technology help student achievement and 21st century skills?	(b) Demonstrate some improved mastery of 21st century skills
15	What percent of your school or district aligns standards, curriculum, assessment and/or uses technology for continuous improvement?	(a) 25% align standards, curriculum and assessment using technology
16	What percent of your school or district integrates digital strategies into assessment and/or measures 21st century skills?	(a) *25% or more beginning to integrate digital strategies into assessment *Limited to use of fixed answer format
17	What percent of students has continuous access to technology?	(b) *Can access Internet at times other than school hours *All teachers are appropriately trained to integrate technology
18	How is research used?	(a) Schools inconsistently apply ad hoc research
19	How do administrators use technology?	(d) *Use technology to set policies, procedures, analyze performance, report and communicate with constituencies *Use technology to manage continuous improvement
20	How do parents and the community use technology?	(b) *Limited access to two-way communications via email, and privacy-protected web tools, e.g.,

to obtain individual attendance & assessment data

Thank you for using the CEO Forum's STaR Chart assessment.

www.iste.org

ISTE Membership Services
iste@iste.org
1.800.336.5191
1.541.302.3777 (Int'l)
1.541.302.3778 (fax)

Contact information for the Washington, DC office, the Eugene, Oregon office, and key ISTE contacts.

Curriculum and Instruction

Current Conditions	Desired Conditions	Data on which They are Based
Teacher-led whole class	Student-centered Small group, collaborative learning Instruction designed with Mayer's Constructivist Learning and Schwartz's Flexible Adaptive Instructional Design	Lesson Plans Syllabus
Textbook	Multimedia resources: TV, streaming video, websites, interactive websites, simulations, online communication, artificial experts, and databases.	Lesson Plans Syllabus
Low technology integration	Lesson plans with technology components within the six-point strategy	Computer Lab logs Lesson Plans

	for delivery, resources for research or implementation, and rubric/spreadsheets for performance assessment.	

Staff Development

Current Conditions	Desired Conditions	Data on which They are Based
District and LEA level staff development for integration techniques and skill development	Technology integration emersed in the curriculum development, delivery and student assessment.	District Training Schedule Technology Resource Teacher Faculty meetings

Facility/Infrastructure

Current Conditions	Desired Conditions	Data on which They are Based
Internet assess	Internet assess	Available in every classroom
Dedicated server for faculty, staff and administration only.	server dedicated to student email accounts	Only teacher accounts available on the district level
WAN, LAN or Wireless Connectivity	WAN, LAN or Wireless Connectivity	Computer lab has WAN and LAN connectivity Wireless for moble classroom

Hardware

Current Conditions	Desired Conditions	Data on which They are Based
2 Moble Carts with 16 Dell with Pentium 3 laptops each (upstairs and downstairs) and one computer lab with 26 Compac Pentium 3	Every student to have a laptop for use in classroom on a weekly basis with at least the minimum requirements recommended by NHCS Technology Plan.	2 mobile computer labs to share for all student population. Inventory Report for Hardware
Desktop Pentium 3 in every room, monitor, TV hookup, and printer.	LCD/Elmo in Biology Classroom	Inventory Report for Hardware

Software

Current Conditions	Desired Conditions	Data on which They are Based
Every computer in computer lab and in the mobile laptop classroom	Every computer in computer lab and in the mobile laptop classroom	Inventory Report for Software

has the following software: Microsoft Explorer, Microsoft Office with Word, Excel, Access, Power Point, and Publisher.	has the following software: Microsoft Explorer, Microsoft Office with Word, Excel, Access, Power Point, and Publisher.	
No student email accounts	Student Accounts in SASinSchool and online communication tool EZBoard.	District Technology Plan
30% of the teachers have a Web page using either SchoolNotes.com or Teacher Web	100% of the teachers to create and maintane individual web page as a communication tool for students and parents.	Lakeside HS website Review of teacher web pages

Current Technology Resources

Hardware			
Location	Type	Description	Quantity
Computer Lab	PC (Pentium II or better)	Pentium Pro, Pentium II, Pentium III, Pentium 4	26
	Laser Printer		3
	LCD Panel, LCD Projector		1
	Scanner		1
	Monitor	(Flat Panel, Cathode Ray)	26
	Telephone		1
Media Center	PC (Pentium II or better)	Pentium Pro, Pentium II, Pentium III, Pentium 4	5
	PC (Pentuim)	Pentium	5
	Inkjet Printer		1
	Laser Printer		1
	Scanner		1
	Monitor	(Flat Panel, Cathode Ray)	8
	Cable TV Access	Cable TV Video Service	1
	Audio Cassette Deck	Audio Cassette Deck	1
	Telephone		1
	Standard Overhead Projector	Digital or Standard C-Band Video Service	1

	VCR		1
	Digital Camera		2
	VHS Camcorder		1
	Quick Cam		2
	LaserDisc Player		2
	Data Projector		1
Wireless Mobile Lab	PC Portable	Laptop, Notebook	16
	Storage Cart		1

Software	
Location	Name
All Rooms (all computers)	Inspiration
	Green Globs
	MS Office 2000
	Oregon Trail
	PrintMaster
	Science Sleuths
	Timeliner
	3D Atlas
	World Discovery Deluxe
	Math Heads
	Student Reference Library
	Hyperstudio
	Eyewitness Encyclopedia of Science
	Multi Media Encyclopedia
	Dictionary, thesaurus and encyclopedia
	Encarta
	SkillsBank
	MS Works
	Eyewitness History of the World
	Occupational Outlook Handbook
	Print Shop
	Groupwise
	Accelerated Reader
	Star Reader Program
	OPAC
	WS-FTP
	Classroom Manager

Network			
Location	Type	Description	Quantity

Computer Lab	Dedicated Internet Access		24
	File Sharing	Networking-NOS Server (Novell, Win NT)	24
Media Center	WAN Access		8
	File Sharing	Networking-NOS Server (Novell, Win NT)	8
Wireless Mobile Lab	Dedicated Internet Access		16
	Wireless Network	Under 100 Mbps Wireless Network	16
Biology Classroom (Rm. 302)	Dedicated Internet Access		1

Facilities	
Type	Quantity
Classrooms	18
Computer Lab	1
Media Center	1

Lakeside High School is a two-level, 59, 576 sq. ft. facility.

Human Resources	
Job Title	Job Description
Principal	Jerry Oates, serving as the chief administrator of a school in developing and implementing policies, programs, curriculum activities, and budgets in a manner that promotes the educational development of each student and the professional development of each staff member.
Assistant Principal	Cheryl Spencer-Beck, serving as a member of the administrative team as assigned by the principal to develop and implement the total school program.
Computer Resource Teacher	Helen Lipka, faculty member requiring an A-licensure in secondary education with a technology credential or instructional technology masters and will be able to demonstrated successful leadership in the field of instruction and emerging

	technology, and develop and provide professional development in technology skills and integration for faculty. She is responsible for maintaining and upgrading all technology resources in the school. She provides a leading role in the technology change team and aid in the needs assessment and inventories related to the school technology plan.
Media Specialist	Vicki Thompson, faculty member requiring an A-licensure in school media or libraryship demonstrating knowledge in the field of media and technology.
Lakeside Faculty (Classroom Teachers)	21
Lakeside 9th Grade Staff	9

Appendix D

Survey

Dear 9th Grade Teachers,
Most of you are aware that I am currently working on my master's degree in Instructional Technology at UNCW. The course that I am taking this semester entitled "Evaluation and Change in Instructional Development," requires me to conduct a needs assessment on a concern. My project partner, Adonica Long and I would like to use this opportunity to evaluate the needs for technology integration in the 9th grade curriculum at Lakeside High School.

Your honest responses to the attached survey will help us better understand your technology needs so that I can provide better support in your use of technology to promote effective teaching and learning.
In order to identify the individual needs, it would be helpful if you include your name in the survey. Please return the completed survey to my mail box located in the main office by March 18, 2005. If you have a question regarding the survey, please contact me at 251-6161 extension 704. Thank you for your time. We greatly appreciate your contribution to this project.
Helen Lipka & Adonica M. Long
Graduate Students
Master of Science in Instructional Technology
University of North Carolina Wilmington

Technology Use Survey
Part I

Please circle the choice which best describe your situation.

1. How many years have you been teaching?
0-5
6-11
12-17
18-23
24-29
30 or more

2. What do you feel is the biggest challenge you face as a classroom teacher at Lakeside High School?
Student standardized testing requirements
Behavior management
Lack of necessary supplies
District and State policies and mandates for technology integration.
Other, please specify

Part II
Please rate each of the following items by circling the appropriate number that applies to you in the box.
6 = strongly agree 5 = agree 4 = undecided 3 = disagree 2 = strongly disagree 1 = not applicable

Item description	SA	A	U	D	SD	NA
1. I would like to learn more about integrating technology into my lessons.	6	5	4	3	2	1
2. I do not know where to begin when thinking of ways to integrate technology into my lessons.	6	5	4	3	2	1
3. I know I can ask the CRT for help with ways to integrate technology	6	5	4	3	2	1
4. I frequently use the overhead projector in lessons.	6	5	4	3	2	1
5. I am very skillful in using the media retrieval system.	6	5	4	3	2	1
6. I am very skillful in using the digital camera	6	5	4	3	2	1
7. I am very skillful in using the Averkey presentation device to integrate technology in the instruction of a lesson.	6	5	4	3	2	1
8. I am very skillful at using the LCD projector.	6	5	4	3	2	1
9. I am very skillful in using the video camera.	6	5	4	3	2	1
10. I feel comfortable using new ways to teach in my class.	6	5	4	3	2	1
11. I am very skillful in using the portable computer lab.	6	5	4	3	2	1
12. I have designed and delivered PowerPoint presentations in lessons.	6	5	4	3	2	1
13. I think integrating technology takes away from my lessons.	6	5	4	3	2	1
14. I would like to integrate technology into my lessons but it is too time consuming.	6	5	4	3	2	1
15. I attended staff development at Lakeside High to learn how to use new software.	6	5	4	3	2	1
16. I attended staff development at the county level to learn how to use new software.	6	5	4	3	2	1
17. I am aware of New Hanover Counties policy regarding the number of technology credits required for license renewal.	6	5	4	3	2	1
18. I am aware of the Department of Instruction for North Carolina curriculum standards on integrating technology into my subject area..	6	5	4	3	2	1

Part III
Please respond to the following questions.

1.) Have you brought your students to the computer lab? Yes ____No _____

If yes, how many times per semester? _____

If No, why? _____

2.) Do you integrate technology into your weekly lessons? Yes ____No ____
If yes, how many times per week? _____
If No, why? _____

3.) Would you be interested in attending monthly technology workshops offered at Lakeside? Yes ____No ____

What day and time is best for you?_____

What types of workshops would you like to see offered? _____

Appendix E

OBSERVATION PROTOCOL

Observation Site: Lakeside High School 9th Grade Teachers

I. Purposes for this observation:

The main purpose is to collect further or more detailed information following extant data and survey (or the information that was not addressed in the extant data and survey).

Triangulation is the secondary purpose.

Collect the information about how technology is actually used by the 9th grade teachers.

II. Description of the Problem

Lack of technology integration into 9th grade curriculum.

III. Observation

Date of Observation: _____

Individual Observed: _____

Starting Time: _____

Ending Time: _____

Observation Guide

Is there any observable technology being used in the classroom during this lesson?

Check all that apply:

Technology	Check	Remark (or Note)
TV/VCR		
TV/Aver Key hook-up to the computer		
Overhead projector		
Digital Camera		
Scanner		
Digital Camcorder		
LCD Projector		
Computer		
Software Program		

If Technology is being used how?

Check all that apply and identify

Summary

_____

_____

Appendix F

INTERVIEW PROTOCOL

Interview Process for Principal – Mr. Oates

I. Introduction

1. Introduce yourself to the Principal
2. Address the purpose of the interview
3. Communicate how information that is collected in the needs assessment instrument will be evaluated and used.

II. Body of the Interview

Questions for the Principal

1.) When you hear the term "technology integration" what comes to mind?
2.) I would like to ask your feelings towards technology integration and the support that I can offer to the 9th grade teachers. How do you view my position at Lakeside as the technology support person?
3.) Can you share with us your knowledge regarding county and school expectations for teachers to integrate technology?
4.) What are your expectations for teachers' integration of technology into their lesson and unit plans?
5.) What do you think about the current status of tech integration at the 9th grade level?
6.) What do you think the greatest obstacle is for teachers for not integrating technology into their lessons?
7.) What are your feelings about staff development in technology integration?
8.) Do you offer any incentives to teachers who integrate technology? If so what are they?

III. Conclusion

1.) Summarize respondent's thoughts.
2.) Is there anything you would like to add about technology integration with the 9th grade teachers?
3.) Can I contact you if I need any further information?
4.) Thank you for your time and cooperation.

I. Introduction for Teachers' Interview

1.) Describe the concern of lack of technology integration into 9th grade curriculum.
2.) Share information why I am conducting this interview - MIT Student, conducting needs assessment.
3.) Communicate how information that is collected in the needs assessment instrument will be evaluated and used.

II. Body of the Interview

Questions for the 9th Grade Teachers

1.) What subject do you teach?
2.) What is your definition of "technology integration?"
3.) How comfortable do you feel using technology in your classroom and lessons?
4.) Can you share with me the technology you use in your lessons and or unit plans?
5.) Can you share with me your perception about the barriers/obstacle prohibiting your use of technology?
6.) What are your interests in using technology in your lessons.
7.) Do you feel comfortable signing up to use the computer lab?
8.) Tell me ways that you have used the digital camera in your class?
9.) Do you use the overhead projector in your class? How often?
10.) Are you comfortable using the media retrieval system at our school?
11.) Tell me the ways you have used Averkey or presenter in any of your lessons?
12.) If you had more time to plan for technology integration would you create integrated lessons?
13.) Have you ever used the mobile computer lab in your classroom? Why or Why not?
14.) Do you take advantage of county wide and school led workshops demonstrating the use of technology?
15.) How can I help you with the use of technology integration in your lessons?

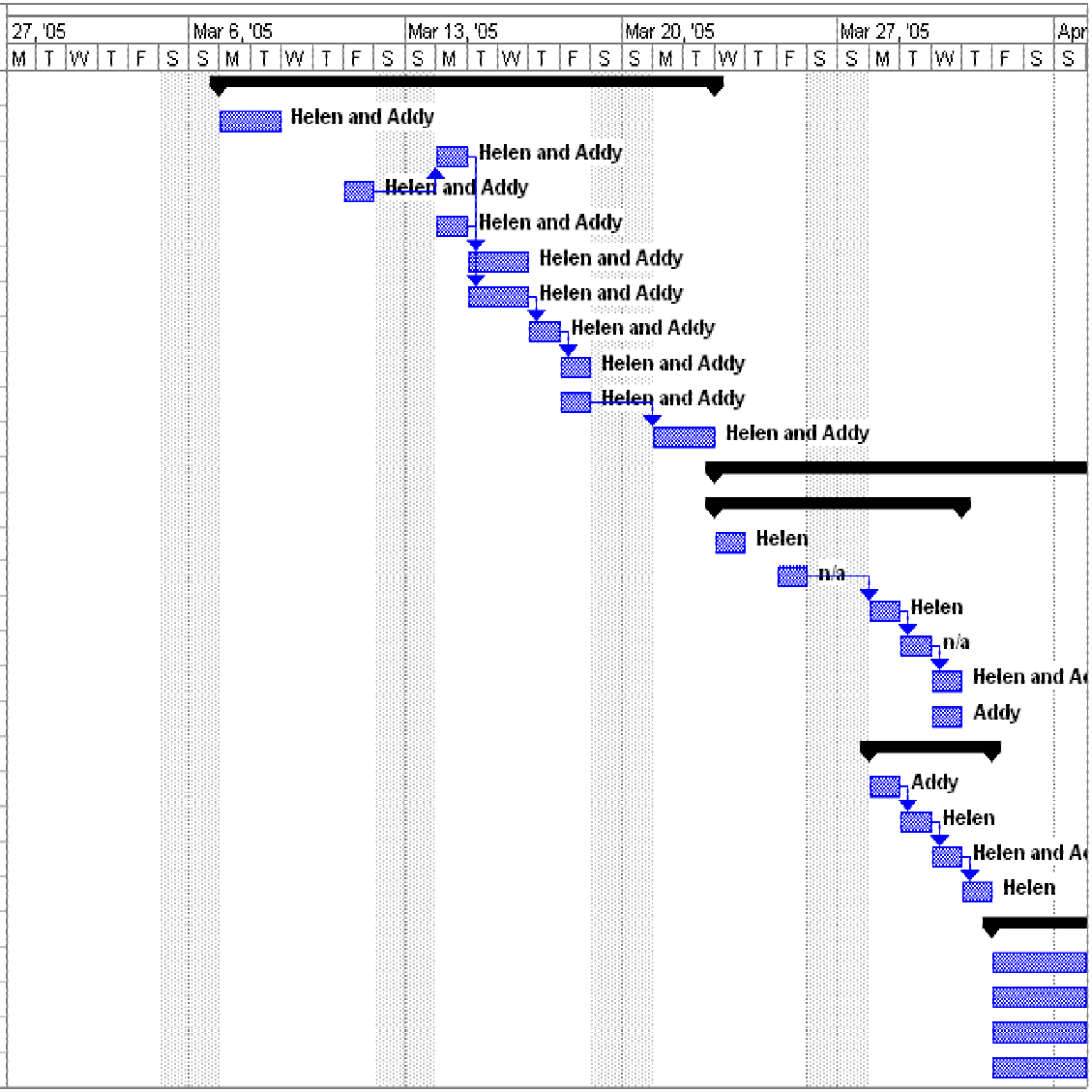
III. Conclusion

1.) Summarize respondent's thoughts.
2.) Is there anything you would like to add about integration technology into your lessons?
3.) Can I contact you if I need any further information?
4.) Thank you for your time and cooperation.

Appendix A

Timeline

ID	Task Name	Duration	Start	Finish
1	**Stage 1: Extant Data Analysis**	**12 days**	**Mon 3/7/05**	**Tue 3/22/05**
2	Review Lesson Plans	2 days	Mon 3/7/05	Tue 3/8/05
3	Review Computer Competency Tests	1 day	Mon 3/14/05	Mon 3/14/05
4	Review Observation Notes	1 day	Fri 3/11/05	Fri 3/11/05
5	Review Staff Development Offerings	1 day	Mon 3/14/05	Mon 3/14/05
6	Hardware Inventory	2 days	Tue 3/15/05	Wed 3/16/05
7	Software Inventory	2 days	Tue 3/15/05	Wed 3/16/05
8	Staff Records	1 day	Thu 3/17/05	Thu 3/17/05
9	Computer Lab Schedules	1 day	Fri 3/18/05	Fri 3/18/05
10	CRT Monthly Report	1 day	Fri 3/18/05	Fri 3/18/05
11	State/County Goals and Objectives	2 days	Mon 3/21/05	Tue 3/22/05
12	**Needs Assessment**	**17 days**	**Wed 3/23/05**	**Tue 4/12/05**
13	**Stage 2: Questionnaire/Survey**	**6 days**	**Wed 3/23/05**	**Wed 3/30/05**
14	Distribute survey and coverletter t	1 day	Wed 3/23/05	Wed 3/23/05
15	Due date for collection of surveys	1 day	Fri 3/25/05	Fri 3/25/05
16	1st reminder for past due surveys	1 day	Mon 3/28/05	Mon 3/28/05
17	cut-off date for surveys	1 day	Tue 3/29/05	Tue 3/29/05
18	Analyze survey results	1 day	Wed 3/30/05	Wed 3/30/05
19	Adjust Observation protocol	1 day	Wed 3/30/05	Wed 3/30/05
20	**Stage 3: Observe 9th grade teache**	**4 days**	**Mon 3/28/05**	**Thu 3/31/05**
21	Observe first 3 teachers	1 day	Mon 3/28/05	Mon 3/28/05
22	Observe second group of 3 teach	1 day	Tue 3/29/05	Tue 3/29/05
23	Analyze results of observations	1 day	Wed 3/30/05	Wed 3/30/05
24	Adjust intervew protocol accordin	1 day	Thu 3/31/05	Thu 3/31/05
25	**Stage 4: Conduct Interview**	**8 days**	**Fri 4/1/05**	**Fri 4/8/05**
26	Interview Principal	5 days	Fri 4/1/05	Tue 4/5/05
27	Interview Subject Matter Expert	5 days	Fri 4/1/05	Tue 4/5/05
28	Interview 4 9th grade teachers	6 days	Fri 4/1/05	Wed 4/6/05
29	Interview remaining 5 9th grade te	7 days	Fri 4/1/05	Thu 4/7/05



Appendix G
SPSS Analysis

Frequency Table

YEARSTCH

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1.00	4	44.4	44.4	44.4
	2.00	3	33.3	33.3	77.8
	5.00	1	11.1	11.1	88.9
	6.00	1	11.1	11.1	100.0
	Total	9	100.0	100.0	

SUBJAREA

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1.00	2	22.2	22.2	22.2
	2.00	2	22.2	22.2	44.4
	3.00	1	11.1	11.1	55.6
	4.00	3	33.3	33.3	88.9
	5.00	1	11.1	11.1	100.0
	Total	9	100.0	100.0	

CHALLENG

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	2.00	6	66.7	66.7	66.7
	5.00	3	33.3	33.3	100.0
	Total	9	100.0	100.0	

Q1

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	2.00	1	11.1	11.1	11.1

	4.00	2	22.2	22.2	33.3
	5.00	4	44.4	44.4	77.8
	6.00	2	22.2	22.2	100.0
	Total	9	100.0	100.0	

Q2					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	2.00	2	22.2	22.2	22.2
	3.00	2	22.2	22.2	44.4
	4.00	2	22.2	22.2	66.7
	5.00	3	33.3	33.3	100.0
	Total	9	100.0	100.0	

Q3					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	5.00	3	33.3	33.3	33.3
	6.00	6	66.7	66.7	100.0
	Total	9	100.0	100.0	

Q4					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	2.00	2	22.2	22.2	22.2
	5.00	2	22.2	22.2	44.4
	6.00	5	55.6	55.6	100.0
	Total	9	100.0	100.0	

Q5					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	2.00	3	33.3	33.3	33.3
	3.00	2	22.2	22.2	55.6

	5.00	3	33.3	33.3	88.9
	6.00	1	11.1	11.1	100.0
	Total	9	100.0	100.0	

Q6					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	2.00	1	11.1	11.1	11.1
	3.00	2	22.2	22.2	33.3
	5.00	3	33.3	33.3	66.7
	6.00	3	33.3	33.3	100.0
	Total	9	100.0	100.0	

Q7					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	2.00	2	22.2	22.2	22.2
	3.00	1	11.1	11.1	33.3
	4.00	2	22.2	22.2	55.6
	5.00	1	11.1	11.1	66.7
	6.00	3	33.3	33.3	100.0
	Total	9	100.0	100.0	

Q8					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	2.00	2	22.2	22.2	22.2
	4.00	2	22.2	22.2	44.4
	5.00	2	22.2	22.2	66.7
	6.00	3	33.3	33.3	100.0
	Total	9	100.0	100.0	

Q9				
	Frequency	Percent	Valid Percent	Cumulative Percent

Valid	3.00	2	22.2	22.2	22.2
	4.00	1	11.1	11.1	33.3
	5.00	4	44.4	44.4	77.8
	6.00	2	22.2	22.2	100.0
	Total	9	100.0	100.0	

Q10					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	3.00	1	11.1	11.1	11.1
	4.00	2	22.2	22.2	33.3
	5.00	2	22.2	22.2	55.6
	6.00	4	44.4	44.4	100.0
	Total	9	100.0	100.0	

Q11					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	2.00	4	44.4	44.4	44.4
	3.00	4	44.4	44.4	88.9
	6.00	1	11.1	11.1	100.0
	Total	9	100.0	100.0	

Q12					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	2.00	1	11.1	11.1	11.1
	3.00	2	22.2	22.2	33.3
	4.00	2	22.2	22.2	55.6
	6.00	4	44.4	44.4	100.0
	Total	9	100.0	100.0	

Q13

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	2.00	3	33.3	33.3	33.3
	3.00	2	22.2	22.2	55.6
	4.00	2	22.2	22.2	77.8
	5.00	1	11.1	11.1	88.9
	6.00	1	11.1	11.1	100.0
	Total	9	100.0	100.0	

Q14

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	2.00	1	11.1	11.1	11.1
	3.00	1	11.1	11.1	22.2
	4.00	2	22.2	22.2	44.4
	5.00	3	33.3	33.3	77.8
	6.00	2	22.2	22.2	100.0
	Total	9	100.0	100.0	

Q15

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	3.00	1	11.1	11.1	11.1
	5.00	7	77.8	77.8	88.9
	6.00	1	11.1	11.1	100.0
	Total	9	100.0	100.0	

Q16

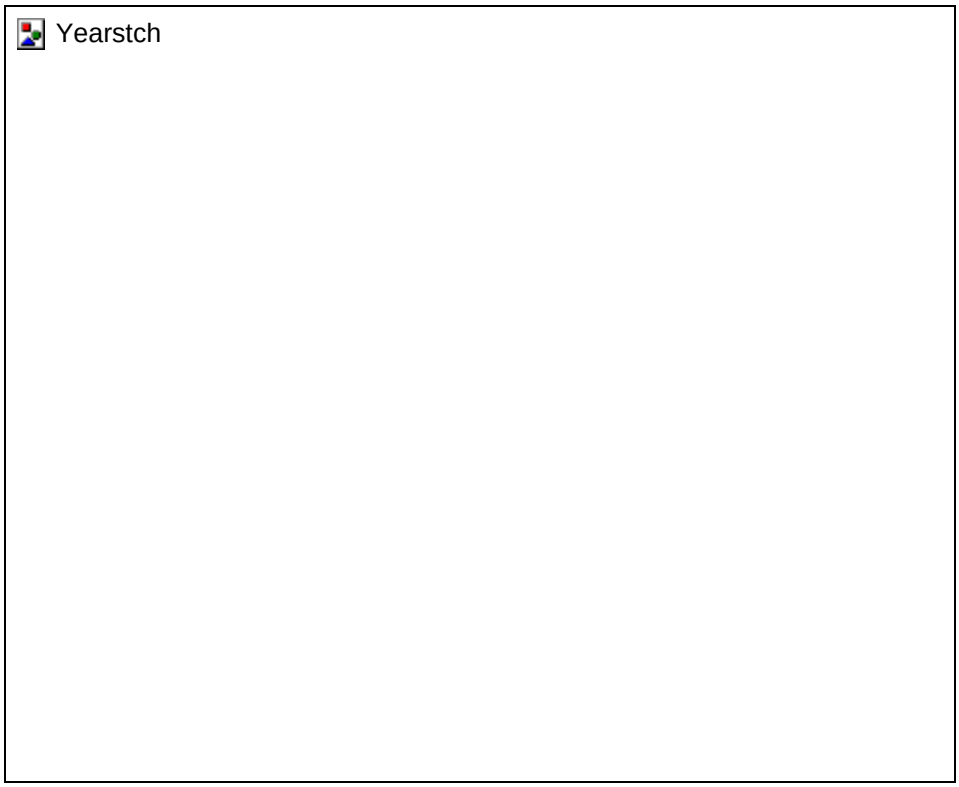
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	3.00	3	33.3	33.3	33.3
	4.00	1	11.1	11.1	44.4
	5.00	4	44.4	44.4	88.9
	6.00	1	11.1	11.1	100.0

	Total	9	100.0	100.0	

Q17					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	2.00	1	11.1	11.1	11.1
	3.00	1	11.1	11.1	22.2
	4.00	1	11.1	11.1	33.3
	5.00	4	44.4	44.4	77.8
	6.00	2	22.2	22.2	100.0
	Total	9	100.0	100.0	

Q18					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	3.00	2	22.2	22.2	22.2
	4.00	1	11.1	11.1	33.3
	5.00	3	33.3	33.3	66.7
	6.00	3	33.3	33.3	100.0
	Total	9	100.0	100.0	

Bar Chart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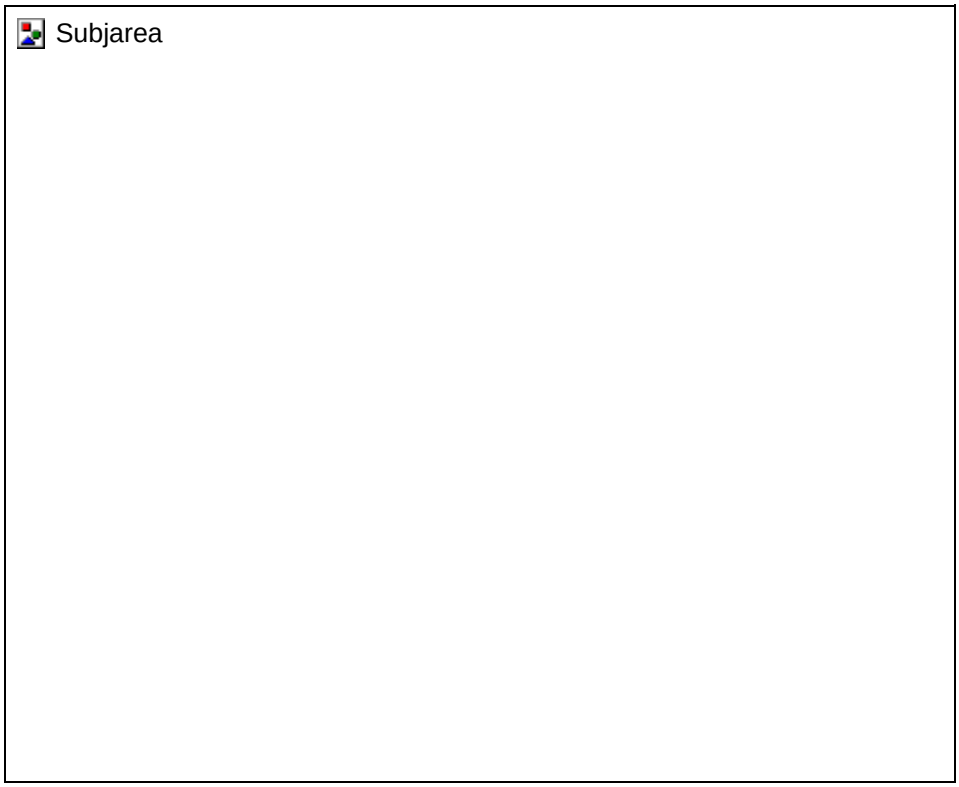
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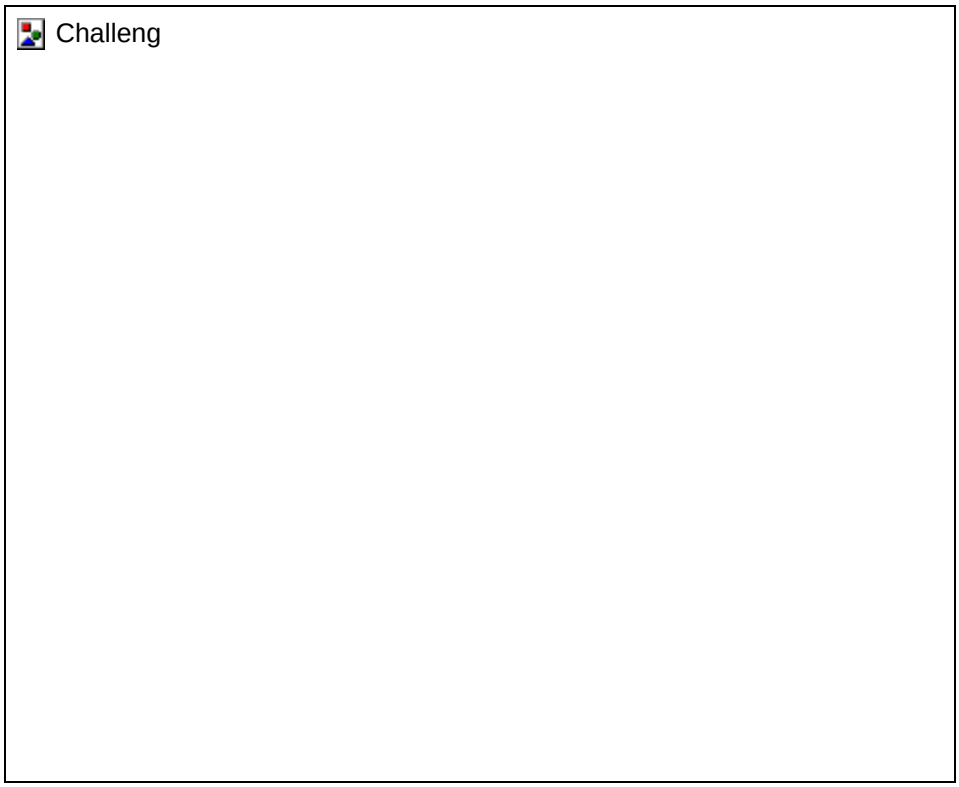
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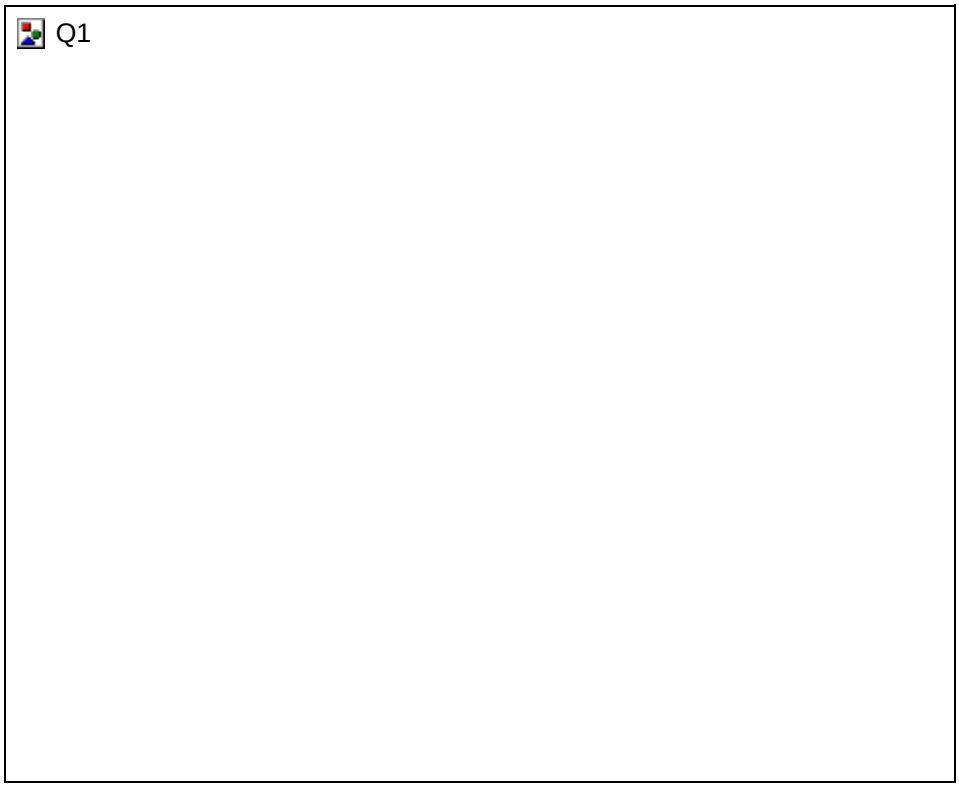
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Q2

Q3

Q4

Q5

Q6

Q7

Q8

Q9

Q10

Q11

Q12

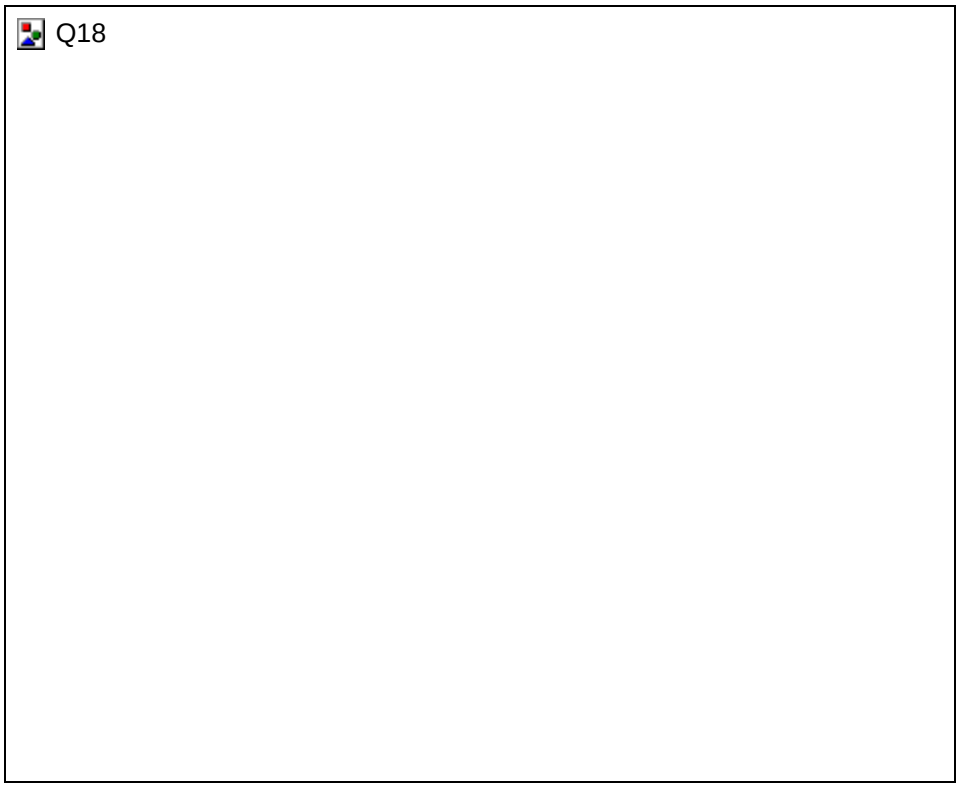
Q13

Q14

Q15

Q16

Q17



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	Cases Used	Statistics for each table are based on all the cases with valid data in the specified range(s) for all variables in each table.
Syntax		CROSSTABS /TABLES=q1 q2 q3 q4 q5 q6 q7 q8 q9 q10 q11 q12 q13

		q14 q15 q16 q17 q18 BY yearstch /FORMAT= AVALUE TABLES /STATISTIC=CORR /CELLS= COUNT .
Resources	Dimensions Requested	2
	Cells Available	116508
	Elapsed Time	0:00:00.08

Case Processing Summary

	Cases					
	Valid		Missing		Total	
	N	Percent	N	Percent	N	Percent
Q1 * YEARSTCH	9	100.0%	0	.0%	9	100.0%
Q2 * YEARSTCH	9	100.0%	0	.0%	9	100.0%
Q3 * YEARSTCH	9	100.0%	0	.0%	9	100.0%
Q4 * YEARSTCH	9	100.0%	0	.0%	9	100.0%
Q5 * YEARSTCH	9	100.0%	0	.0%	9	100.0%
Q6 * YEARSTCH	9	100.0%	0	.0%	9	100.0%
Q7 * YEARSTCH	9	100.0%	0	.0%	9	100.0%
Q8 * YEARSTCH	9	100.0%	0	.0%	9	100.0%
Q9 * YEARSTCH	9	100.0%	0	.0%	9	100.0%
Q10 * YEARSTCH	9	100.0%	0	.0%	9	100.0%
Q11 * YEARSTCH	9	100.0%	0	.0%	9	100.0%
Q12 * YEARSTCH	9	100.0%	0	.0%	9	100.0%
Q13 * YEARSTCH	9	100.0%	0	.0%	9	100.0%
Q14 * YEARSTCH	9	100.0%	0	.0%	9	100.0%
Q15 * YEARSTCH	9	100.0%	0	.0%	9	100.0%
Q16 * YEARSTCH	9	100.0%	0	.0%	9	100.0%
Q17 * YEARSTCH	9	100.0%	0	.0%	9	100.0%
Q18 * YEARSTCH	9	100.0%	0	.0%	9	100.0%

Q1 * YEARSTCH

Crosstab Count						
		YEARSTCH				Total
		1.00	2.00	5.00	6.00	
Q1	2.00			1		1
	4.00	1	1			2
	5.00	2	2			4
	6.00	1			1	2
Total		4	3	1	1	9

Symmetric Measures					
		Value	Asymp. Std. Error(a)	Approx. T(b)	Approx. Sig.
Interval by Interval	Pearson's R	-.218	.458	-.592	.573(c)
Ordinal by Ordinal	Spearman Correlation	-.084	.432	-.223	.830(c)
N of Valid Cases		9			
a Not assuming the null hypothesis.					
b Using the asymptotic standard error assuming the null hypothesis.					
c Based on normal approximation.					

Q2 * YEARSTCH

Crosstab Count						
		YEARSTCH				Total
		1.00	2.00	5.00	6.00	
Q2	2.00		1	1		2
	3.00	1			1	2
	4.00	1	1			2
	5.00	2	1			3
Total		4	3	1	1	9

Symmetric Measures					
		Value	Asymp. Std. Error(a)	Approx. T(b)	Approx. Sig.
Interval by Interval	Pearson's R	-.546	.174	-1.722	.129(c)
Ordinal by Ordinal	Spearman Correlation	-.530	.195	-1.653	.142(c)
N of Valid Cases		9			
a Not assuming the null hypothesis.					
b Using the asymptotic standard error assuming the null hypothesis.					
c Based on normal approximation.					

Q3 * YEARSTCH

Crosstab Count						
		YEARSTCH				Total
		1.00	2.00	5.00	6.00	
Q3	5.00	2	1			3
	6.00	2	2	1	1	6
Total		4	3	1	1	9

Symmetric Measures					
		Value	Asymp. Std. Error(a)	Approx. T(b)	Approx. Sig.
Interval by Interval	Pearson's R	.401	.172	1.158	.285(c)
Ordinal by Ordinal	Spearman Correlation	.389	.256	1.116	.301(c)
N of Valid Cases		9			
a Not assuming the null hypothesis.					
b Using the asymptotic standard error assuming the null hypothesis.					
c Based on normal approximation.					

Q4 * YEARSTCH

Crosstab Count						
		YEARSTCH				Total
		1.00	2.00	5.00	6.00	
Q4	2.00	2				2
	5.00		1	1		2
	6.00	2	2		1	5
Total		4	3	1	1	9

Symmetric Measures					
		Value	Asymp. Std. Error(a)	Approx. T(b)	Approx. Sig.
Interval by Interval	Pearson's R	.329	.181	.922	.387(c)
Ordinal by Ordinal	Spearman Correlation	.265	.331	.727	.491(c)
N of Valid Cases		9			
a Not assuming the null hypothesis.					
b Using the asymptotic standard error assuming the null hypothesis.					
c Based on normal approximation.					

Q5 * YEARSTCH

Crosstab Count						
		YEARSTCH				Total
		1.00	2.00	5.00	6.00	
Q5	2.00	3				3
	3.00		1		1	2
	5.00	1	1	1		3
	6.00		1			1
Total		4	3	1	1	9

Symmetric Measures

		Value	Asymp. Std. Error(a)	Approx. T(b)	Approx. Sig.
Interval by Interval	Pearson's R	.211	.257	.572	.585(c)
Ordinal by Ordinal	Spearman Correlation	.498	.284	1.519	.173(c)
N of Valid Cases		9			
a Not assuming the null hypothesis.					
b Using the asymptotic standard error assuming the null hypothesis.					
c Based on normal approximation.					

Q6 * YEARSTCH

Crosstab
Count

		YEARSTCH				Total
		1.00	2.00	5.00	6.00	
Q6	2.00		1			1
	3.00	1	1			2
	5.00	1	1		1	3
	6.00	2		1		3
Total		4	3	1	1	9

Symmetric Measures

		Value	Asymp. Std. Error(a)	Approx. T(b)	Approx. Sig.
Interval by Interval	Pearson's R	.192	.216	.517	.621(c)
Ordinal by Ordinal	Spearman Correlation	-.115	.332	-.307	.768(c)
N of Valid Cases		9			
a Not assuming the null hypothesis.					
b Using the asymptotic standard error assuming the null hypothesis.					
c Based on normal approximation.					

Q7 * YEARSTCH

Crosstab Count						
		YEARSTCH				Total
		1.00	2.00	5.00	6.00	
Q7	2.00		1		1	2
	3.00	1				1
	4.00	1	1			2
	5.00	1				1
	6.00	1	1	1		3
Total		4	3	1	1	9

Symmetric Measures					
		Value	Asymp. Std. Error(a)	Approx. T(b)	Approx. Sig.
Interval by Interval	Pearson's R	-.190	.374	-.512	.624(c)
Ordinal by Ordinal	Spearman Correlation	-.177	.376	-.477	.648(c)
N of Valid Cases		9			
a Not assuming the null hypothesis.					
b Using the asymptotic standard error assuming the null hypothesis.					
c Based on normal approximation.					

Q8 * YEARSTCH

Crosstab Count						
		YEARSTCH				Total
		1.00	2.00	5.00	6.00	
Q8	2.00		2			2
	4.00	2				2
	5.00	1			1	2
	6.00	1	1	1		3
Total		4	3	1	1	9

Symmetric Measures					
		Value	Asymp. Std. Error(a)	Approx. T(b)	Approx. Sig.
Interval by Interval	Pearson's R	.238	.182	.649	.537(c)
Ordinal by Ordinal	Spearman Correlation	.105	.288	.280	.788(c)
N of Valid Cases		9			
a Not assuming the null hypothesis.					
b Using the asymptotic standard error assuming the null hypothesis.					
c Based on normal approximation.					

Q9 * YEARSTCH

Crosstab Count						
		YEARSTCH				Total
		1.00	2.00	5.00	6.00	
Q9	3.00	1	1			2
	4.00	1				1
	5.00	2	1		1	4
	6.00		1	1		2
Total		4	3	1	1	9

Symmetric Measures					
		Value	Asymp. Std. Error(a)	Approx. T(b)	Approx. Sig.
Interval by Interval	Pearson's R	.418	.170	1.219	.262(c)
Ordinal by Ordinal	Spearman Correlation	.453	.202	1.345	.220(c)
N of Valid Cases		9			
a Not assuming the null hypothesis.					
b Using the asymptotic standard error assuming the null hypothesis.					
c Based on normal approximation.					

Q10 * YEARSTCH

Crosstab Count						
		YEARSTCH				Total
		1.00	2.00	5.00	6.00	
Q10	3.00	1				1
	4.00	1	1			2
	5.00	1	1			2
	6.00	1	1	1	1	4
Total		4	3	1	1	9

Symmetric Measures					
		Value	Asymp. Std. Error(a)	Approx. T(b)	Approx. Sig.
Interval by Interval	Pearson's R	.538	.169	1.688	.135(c)
Ordinal by Ordinal	Spearman Correlation	.528	.250	1.645	.144(c)
N of Valid Cases		9			
a Not assuming the null hypothesis.					
b Using the asymptotic standard error assuming the null hypothesis.					
c Based on normal approximation.					

Q11 * YEARSTCH

Crosstab Count						
		YEARSTCH				Total
		1.00	2.00	5.00	6.00	
Q11	2.00	2	2			4
	3.00	2		1	1	4
	6.00		1			1
Total		4	3	1	1	9

Symmetric Measures					
		Value	Asymp. Std. Error(a)	Approx. T(b)	Approx. Sig.
Interval by Interval	Pearson's R	.123	.130	.327	.753(c)
Ordinal by Ordinal	Spearman Correlation	.282	.232	.777	.463(c)
N of Valid Cases		9			
a Not assuming the null hypothesis.					
b Using the asymptotic standard error assuming the null hypothesis.					
c Based on normal approximation.					

Q12 * YEARSTCH

Crosstab Count						
		YEARSTCH				Total
		1.00	2.00	5.00	6.00	
Q12	2.00	1				1
	3.00	1	1			2
	4.00		1		1	2
	6.00	2	1	1		4
Total		4	3	1	1	9

Symmetric Measures					
		Value	Asymp. Std. Error(a)	Approx. T(b)	Approx. Sig.
Interval by Interval	Pearson's R	.154	.266	.413	.692(c)
Ordinal by Ordinal	Spearman Correlation	.164	.337	.439	.674(c)
N of Valid Cases		9			
a Not assuming the null hypothesis.					
b Using the asymptotic standard error assuming the null hypothesis.					
c Based on normal approximation.					

Q13 * YEARSTCH

Crosstab Count						
		YEARSTCH				Total
		1.00	2.00	5.00	6.00	
Q13	2.00	2		1		3
	3.00		1		1	2
	4.00	2				2
	5.00		1			1
	6.00		1			1
Total		4	3	1	1	9

Symmetric Measures					
		Value	Asymp. Std. Error(a)	Approx. T(b)	Approx. Sig.
Interval by Interval	Pearson's R	-.203	.216	-.549	.600(c)
Ordinal by Ordinal	Spearman Correlation	.055	.342	.145	.889(c)
N of Valid Cases		9			
a Not assuming the null hypothesis.					
b Using the asymptotic standard error assuming the null hypothesis.					
c Based on normal approximation.					

Q14 * YEARSTCH

Crosstab Count						
		YEARSTCH				Total
		1.00	2.00	5.00	6.00	
Q14	2.00	1				1
	3.00				1	1
	4.00	1	1			2
	5.00	1	2			3

	6.00	1		1		2
Total		4	3	1	1	9

Symmetric Measures					
		Value	Asymp. Std. Error(a)	Approx. T(b)	Approx. Sig.
Interval by Interval	Pearson's R	-.017	.391	-.044	.966(c)
Ordinal by Ordinal	Spearman Correlation	.027	.401	.072	.944(c)
N of Valid Cases		9			
a Not assuming the null hypothesis.					
b Using the asymptotic standard error assuming the null hypothesis.					
c Based on normal approximation.					

Q15 * YEARSTCH

Crosstab Count						
		YEARSTCH				Total
		1.00	2.00	5.00	6.00	
Q15	3.00	1				1
	5.00	3	3		1	7
	6.00			1		1
Total		4	3	1	1	9

Symmetric Measures					
		Value	Asymp. Std. Error(a)	Approx. T(b)	Approx. Sig.
Interval by Interval	Pearson's R	.456	.168	1.355	.218(c)
Ordinal by Ordinal	Spearman Correlation	.534	.175	1.672	.138(c)
N of Valid Cases		9			
a Not assuming the null hypothesis.					
b Using the asymptotic standard error assuming the null hypothesis.					

c Based on normal approximation.

Q16 * YEARSTCH

Crosstab Count						
		YEARSTCH				Total
		1.00	2.00	5.00	6.00	
Q16	3.00	2	1			3
	4.00	1				1
	5.00	1	2		1	4
	6.00			1		1
Total		4	3	1	1	9

Symmetric Measures					
		Value	Asymp. Std. Error(a)	Approx. T(b)	Approx. Sig.
Interval by Interval	Pearson's R	.598	.153	1.972	.089(c)
Ordinal by Ordinal	Spearman Correlation	.599	.201	1.979	.088(c)
N of Valid Cases		9			
a Not assuming the null hypothesis.					
b Using the asymptotic standard error assuming the null hypothesis.					
c Based on normal approximation.					

Q17 * YEARSTCH

Crosstab Count						
		YEARSTCH				Total
		1.00	2.00	5.00	6.00	
Q17	2.00	1				1
	3.00	1				1
	4.00		1			1
	5.00	2	1		1	4

	6.00		1	1		2
Total		4	3	1	1	9

Symmetric Measures					
		Value	Asymp. Std. Error(a)	Approx. T(b)	Approx. Sig.
Interval by Interval	Pearson's R	.468	.155	1.400	.204(c)
Ordinal by Ordinal	Spearman Correlation	.549	.182	1.737	.126(c)
N of Valid Cases		9			
a Not assuming the null hypothesis.					
b Using the asymptotic standard error assuming the null hypothesis.					
c Based on normal approximation.					

Q18 * YEARSTCH

Crosstab Count						
		YEARSTCH				Total
		1.00	2.00	5.00	6.00	
Q18	3.00	1	1			2
	4.00	1				1
	5.00	1	1		1	3
	6.00	1	1	1		3
Total		4	3	1	1	9

Symmetric Measures					
		Value	Asymp. Std. Error(a)	Approx. T(b)	Approx. Sig.
Interval by Interval	Pearson's R	.315	.202	.878	.409(c)
Ordinal by Ordinal	Spearman Correlation	.272	.278	.748	.479(c)
N of Valid Cases		9			
a Not assuming the null hypothesis.					

b Using the asymptotic standard error assuming the null hypothesis.
c Based on normal approximation.

Appendix H

Interview responses from Mr. Oates, Principal

1. When you hear the term "technology integration" what come to mind?

Technology integration is the use of resources such as computers, TV, overhead projector, and LCD player for instruction.

2. I would like to ask your feelings towards technology integration and the support that I can offer to the 9th grade teachers. How do you view my position at Lakeside as the technology support person?

Your position is a vital position at our school. I see you as wearing many hats. You are a hardware person, teach staff development, run the Site-Based committee and help everyone in any way that you can. I feel that the support you offer to me as well as the entire staff is vital to keep the technology at our school running. I see you working in the teachers classrooms, teaching lessons to students, dealing with the workers from the technology department. You are a vital person at our school.

3. Can you share with us your knowledge regarding county and school expectations for teachers to integrate technology?

I expect teachers to use the available resources that we have at Lakeside in their lessons. Our students require a different method of teaching. I believe a hands-on approach is the best way that our students learn. The county requires teachers to earn 10 CEU's within a 5 year cycle to renew their teaching license.

4. What are your expectations for teachers' integration of technology into their lesson and unit plans?

I would like to see more integration of technology at our school especially in the year long 9th grade classes. As I said, I believe that our students learn best when they are actively involved in their lessons. Technology is the way to go.

5. What do you think about the current status of technology integration at the 9th grade level?

From classroom observations and lesson plans I see that the 9th grade teachers as a whole are not being creative in the way they use technology in their lessons. I see teachers using the overhead, I see the TV being used to show movies to enhance a specific topic, but on a whole I do not see the computers in the classroom being used.

6. What do you think the greatest obstacle is for teachers for not integrating technology into their lessons?

Time, skill level of our 9th grade teachers and behavior problems within the classroom.

7. What are your feelings about staff development in technology integration?

I think that it is important to motivate teacher to attend staff development in regards to

technology integration. You have my support all the way.

8. Do you offer any incentives to teachers who integrate technology? If so what are they?

Presently I do not offer any incentives. I will think about how I can reward teachers who are using technology in their lessons.

Interview responses from the 9th grade teachers

1. What is your definition of "technology integration?"

~Using technology in regular lessons. ~Using technology to expand students understanding of a subject. ~Using technology to further teaching. ~Learning about the software and hardware of the computer. Learning different computer programs. ~ Using computers in the class. ~ Using Computer to teach class. ~The use of auxiliary equipment to enhance instructional purposes. ~ Using computers in lessons.

1.a.)I asked a related question since most teachers hear technology and responded with computers only.
I asked the teachers what resources we have at Lakeside that they consider technology.

~Computers, LCD projectors, overhead projectors, mobile computer lab ~Graphic calculators, software programs like skills bank, power point presentations. ~Audiovisual resources, computers, lab equipment. ~Computers and graphic calculators. ~Computers ~Calculators, probeware, digital microscopes. ~ Computer on wheels, media retrieval, electronic answering devices. ~ Computers, TV and overhead.

2.) How comfortable do you feel using technology in your classroom and lessons?

~Very Comfortable ~Very Comfortable ~ Fairly Comfortable ~ Not very comfortable ~ Excellent ~Very Comfortable ~Very Comfortable ~Very Comfortable

3.) Can you share with me the technology you use in your lessons and or unit plans?

~Overhead , I don't have a TV in my classroom ~Use Power Pint for student notes, graphic calculators, and software programs for

remediation.
~Use Power Point daily
~ Overhead for instruction, graphic calculators
~Word processing, skills bank, nova net
~ Power Point for notes and quizzes
~ Power Point or instruction note taking, Student projects
~ Power Point

4.) Can you share with me your perception about the barriers/obstacle prohibiting your use of technology?

~Do not have available equipment in classroom
~Lack of resources in classroom. Inability to get into the computer lab, time to develop lessons, inability to get into the computer lab
~It is hard for student to see the TV when I use the averkey as a presentation tool, lack of resources as in an LCD player in my classroom
~Resources – our graphing calculators are old are TI 82 and the textbook an the rest of the county uses TI 83 calculators
~Student attention to task on hand, I have trouble with student who are lagging behind in their work. What do I do with the students who finish early?
~Being locked out of interactive websites due to policies set by the county on the computers, student behavior.
~Attendance, students sent to ISSP when I am doing a project, technology that is used for whole group rather than individuals.
~ Student behavior and lack of working resources.

5.) What are your interests in using technology in your lessons?

~ Would like to have a smart board to use in my class
~I like to use technology because it is preparing student for future jobs
~Presentation of lessons using a LCD player so student can view power point better that the TV and averkey
~ none
~I like to use technology when it is running smoothly. I have a problem when there are glitches
~ I would like a smart board to use for student interaction and kinesthetic learning
~I think I use technology to the best use in my lessons

6.) Do you feel comfortable signing up to use the computer lab?

~Yes
~Yes
~No, never used it
~No, time constraint. I am trying to cover all the curriculum for the End Of Course Test.
~ No
~Yes
~Yes
~Yes

7.) If you had more time to plan for technology integration would you create integrated lessons?

~ Time is not an issue with me
~Possibly
~If I had more time sure
~No I am too the restricted by the curriculum
~ Yes, time is lacking
~ I already do. Time is not an issue
~I integrate whenever I can

8.) Have you ever used the mobile computer lab in your classroom? Why or Why not?

~No, I heard it doesn't work well
~No,no one taught me how to use it
~No
~No
~Yes, batteries run out before the end of class
~ No, I didn't know we had one
~No, I have had no reason to use it because I have always signed up ion advance for the computer lab for projects
~ No, I have had no reason to use it because I have always signed up ion advance for the computer lab for projects
~

9.) How can I help you with the use of technology integration in your lessons?

~ Can you order resources? I would kike a smart board for my classroom.
~Teach me how to use the mobile computer lab and get my computer working better
~Order XP machines for classrooms
~I need help with NCWise, and software programs. I am not computer comfortable.
~Just be available to me when I bring my students to the lab
~Please get sites unblocked for student use. Order more up-to-date resources.
~No way. I am self efficient
~I would like to learn more software programs to integrate in my lessons.